



Norman H. Bangerter
Governor

Dee C. Hansen
Executive Director

Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

DOGM
MINERALS PROGRAM
FILE COPY

March 12, 1990

Mr. Glen P. Jones, Manager
Mining and Properties
General Refractories Company
600 Grant Street, Room 3000
Pittsburgh, Pennsylvania 15219

Dear Mr. Jones:

Re: Initial Completeness Review of Notice of Intention to Commence Large Mining Operations, Roudabush #1 Mine, M/045/027, Tooele County, Utah

Thank you for your recent Notice of Intention to Commence Large Mining Operations. The Division has completed its initial review of your application and has found it to be conceptually complete. However, we do have a few technical concerns which will need to be resolved before we can issue a tentative approval for this proposal. Each technical concern has been written to reference the pertinent rule or regulation that corresponds:

R613-004-106.3 Operation Plan

The permit application listed the total estimated disturbed acreage as 13.5 acres (12 acres=mine site, 1.5 acres=access/haul roads). The following disturbed acreages were planimetered from Map 3, "Mine Phasing": present mine quarry area = 4 acres; future quarry area = 15.3 acres; spoil pile = 1 acre; stockpile area = 0.7 acres; access roads within the property 0.7 acres. These measurements total 21.7 acres of disturbance. The application should be revised accordingly. This figure was used in calculating the Division's reclamation surety estimate.

Page 2
Mr. Glen P. Jones
M/045/027
March 12, 1990

R613-004-113 Surety

The Division has calculated a \$89,000 (1995 dollars) reclamation surety based upon 21.7 acres of disturbance. The reclamation estimate was based upon third party costs to reclaim the site. A copy of the reclamation estimate is attached. As you can see, the "material redistribution" cost factor accounts for the largest portion of the reclamation estimate (\$51,086). We assumed a worst case scenario of having to distribute the total 62,300 cubic yard volume (2 foot depth/19.3 acres) of stockpiled waste fines over the entire quarry floor upon final reclamation.

This estimate does not credit the \$15,000 reclamation surety that has been filed with Tooele County. Deducting this amount from the \$74,256 (1990 dollars) total, yields a balance of \$59,256 (1990 dollars). Adding contingency and escalation costs would inflate this figure to \$71,178 (1995 dollars). General Refractories Company (GRC) may choose to post an incremental reclamation surety rather than bond for the total life of mine, 21.7 acre disturbance. This would reduce the amount of surety to be posted, based upon an alternative amount of surface disturbance.

Contemporaneous reclamation would also have an impact on lowering the surety costs. The application did not contain sufficient information to evaluate the difference in reclamation costs under the incremental bonding or contemporaneous reclamation scenarios. Should GRC decide to pursue one of these alternatives then supplemental information will be required.

The application also contains some confusing statements regarding the size of the waste material to be stockpiled for final reclamation. The initial part of the application indicates that a minus 1/2 inch material will be rejected and stockpiled. Later in the application (see Tooele County Special Use response), a minus 3 inch material is to be stockpiled. Which size was used as the basis for the 20% estimate of waste/reject material to be produced over the life of the operation? The size could have an impact on the total volume of fines expected and the suitability for reclamation. Please clarify which size classification is correct.

Page 3
Mr. Glen P. Jones
M/045/027
March 12, 1990

R613-004-112 Variance

GRC has requested variances from certain sections of rules R613-004-106 and 110, Operation and Reclamation Plan. The Division will grant the variances from topsoil salvaging and replacement due to the lack of sufficient surficial material on the mine site.

The Division accepts GRC's proposal to redistribute the rejected fines material over the quarry floor upon reclamation. The fines must be amended appropriately prior to seeding and mulching.

GRC will need to specify the type of fertilizer and the rate to be used at final reclamation. This needs to be specified before permit approval and not be postponed. GRC indicated in the plan, that a fertilizer rate would be based on an analysis of the processing waste material.

The Division will require that a nutrient evaluation be performed on the processed material or a blanket application of 200 lb/ac diammonium phosphate (18-46-0) be used.

GRC has proposed a seed mix of 3 species each at 20 lb/ac. The Division recommends the following seed mix, based on the vegetation report submitted with the permit.

<u>Common Species</u>	<u>Scientific Name</u>	<u>Rate*lb/ac PLS</u>
Sandberg bluegrass	Poa secunda	4
Bluebunch wheatgrass	Agropyron spicatum	4
Indian ricegrass	Oryzopsis hymenoides	4
Rabbitbrush	Chrysothamnus viscidiflorus	1
Blue flax	Linum Lewisii	2
Arrowleaf balsamroot	Balsamorhiza sagittata	1
Yellow sweetclover	Melilotus officinalis	<u>2</u>
TOTAL		18 lb/ac

*Rate is for broadcast seeding, if drill seeded, this rate can be reduced by 1/2.

Page 4
Mr. Glen P. Jones
M/045/027
March 12, 1990

A copy of your application was forwarded to the Department of State Health, Bureau of Water Pollution Control for their review and comment. They will forward their comments to you independently of ours if any are warranted. Please contact Mr. Lyle Stott at (801) 538-6146 for further information regarding the status of their review.

We would like to coordinate an onsite inspection of the mine site with you or your company representative. Please contact me to arrange a convenient date and time for this inspection.

Thank you for your patience and cooperation in completing this permitting action.

Sincerely,

A handwritten signature in cursive script, appearing to read "D. Wayne Hedberg".

D. Wayne Hedberg
Permit Supervisor

jb
Attachment
cc: Lyle Stott, BWPC
Rod Thompson, Tooele County
Lowell Braxton
Minerals Team
WMN/1-4

Reclamation Estimate

Feb. 6, 1990

General Refractories Company

Roudabush Mine Tooele County

M/045/027

Prepared by Utah State Division of Oil, Gas & Mining

===== Reclamation Plan Details =====

- Highwall Reduction 3:1 (0.8 acre or est. 28,000 cu yd)
- Material Redistribution Over Quarry Floor 2 ft Deep (62,300 cu yd or 19.3 acres)
- Rip Roads (0.7 acre)
- Scarify Spoil & Stockpile Areas (1.7 acres)
- Revegetation, Adding Soil Nutrients (21.7 acres)
- Mobilization (Third Party Doing Reclamation)

Description	Quantity	Unit	\$/Unit	Cost(\$)
Highwall Reduction	28,000	cu yd	0.39	10,920
Material Redistribution	62,300	cu yd	0.82	51,086
Rip Roads	0.70	acre	320.00	224
Scarify Spoil & Stockpile Areas	1.70	acre	320.00	544
Revegetate	21.70	acre	460.00	9,982
Mobilization	lump sum	lump sum	1500.00	1,500
SUBTOTAL				74,256
+10% CONTINGENCY				7,426
SUBTOTAL				81,682
+ ESCALATION (1.84% FOR 5 YRS)				7,515
TOTAL				89,196
ROUNDED TOTAL(1995-\$)				89,000